SUMMARY OF THE INVENTION

The present invention provides an immunogenic target for administration to a patient to prevent and / or treat cancer. In particular, the immunogenic target is a tumor antigen ("TA") and / or an angiogenesis-associated antigen ("AA"). In one embodiment, the immunogenic target is encoded by **SEQ ID NO.: 5** or has the amino acid sequence of **SEQ ID NO.: 6**. In certain embodiments, the TA and / or AA are administered to a patient as a nucleic acid contained within a plasmid or other delivery vector, such as a recombinant virus. The TA and / or AA may also be administered in combination with additional tumor antigens (i.e., SEQ ID NOS.: 1-4) and / or an immune stimulator, such as a co-stimulatory molecule or adjuvant.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1. BFA4 cDNA sequence (SEQ ID NO.:1).

Figure 2. BFA4 amino acid sequence (SEQ ID NO.:2).

Figure 3. BCY1 nucleotide (A; SEQ ID NO.:3) and amino acid (B; SEQ ID NO.:4) sequences.

Figure 4. BFA5 cDNA sequence (SEQ ID NO.:5).

Figure 5. BFA5 amino acid sequence (SEQ ID NO.:6).

DETAILED DESCRIPTION

The present invention provides reagents and methodologies useful for treating and / or preventing cancer. All references cited within this application are incorporated by reference.

In one embodiment, the present invention relates to the induction or enhancement of an immune response against one or more tumor antigens ("TA") to prevent and / or treat cancer. In certain embodiments, one or more TAs may be combined. In preferred embodiments, the immune response results from expression of a TA in a host cell following administration of a nucleic acid vector encoding the tumor antigen or the tumor antigen itself in the form of a peptide or polypeptide, for example.

As used herein, an "antigen" is a molecule such as a polypeptide or a portion thereof that produces an immune response in a host to whom the antigen has been administered. The immune response may include the production of antibodies that bind to at least one epitope of the antigen and / or the generation of a cellular immune response against cells expressing an epitope of the antigen. The response may be an enhancement of a current immune response by, for example, causing increased antibody production, production of antibodies with increased affinity for the antigen, or an increased or more effective cellular response (i.e., increased T cells or T cells with